

DRAFT

South Delta Fish Facilities Forum July 18, 2003

Purpose:

To recommend criteria and priorities to be used in the development of alternatives for cost effective fish protection facilities in the South Delta.

Forum Scope/Charge:

- ✓ The SFFF Forum will cause focused discussions on what we know and do not know about fish protection in the South Delta due to facility factors and the pumping plant's hydraulic zone of influence in the Delta. This will help in clarifying the fish protection issues at the SD intakes or to prioritize actions.
- ✓ The Forum will evaluate screen facility alternatives, and determine if there are alternatives to screening.
- ✓ The Forum will investigate "direct" fish losses due to the fish facilities and pumping plants. Potential measures to minimize those losses will be analyzed.
- ✓ The Forum will recommend priorities for a sequential approach to develop fish protection in the South Delta.
- ✓ The Forum will not address fish population level impacts of facility fish losses (however, other groups will).

CALFED Bay-Delta Program

South Delta Fish Facilities Actions

Note: The following summary is intended for discussion purposes at the South Delta Fish Facilities Forum meeting on July 18, 2003. It has been prepared by Darryl Hayes, CBDA

Background Information

The State and Federal water projects operate fish protection facilities just upstream of their respective pumping plants in the South Delta. Both facilities use louver systems to separate fish from the diverted water. These fish are collected into recessed holding and subsequently transported back to the Delta, away from the pumping plant's zone of influence. These behavioral guidance and collection systems do not meet current fish screen criteria.

The CALFED ROD identified that these fish facilities should be replaced as actions within the Conveyance Program. While increasing SWP pumping to 8,500 cfs (three day average flows) does not specifically require new fish screens, they are a necessary component to increasing SWP delivery capability to the proposed 10,300 cfs. The Biological Opinions for the CALFED Programmatic EIR/S state that ESA consultation on fish facilities will be part of the project specific 8,500 and 10,300 SDIP actions. The BO also laid out a process for fish facility development and implementation.

The Biological Opinions state that "best available screen and salvage technologies should be developed." This was envisioned by constructing and operating a 500 cfs Tracy Fish Test Facility (TFTF) using Best Available Technology (BAT). Subsequent to this, fish screens were envisioned to be constructed at the head of Clifton Court Forebay in a series of full sized modules. The 10,300 SDIP would be contingent upon the implementation of at least the completion of the first large module (2500 cfs) with an implementation plan to construct and operate the completion of fish screen facilities.

Additional actions were identified in the ROD to investigate the joint use of the proposed large fish screen facilities by connecting Clifton Court Forebay to the Tracy pumping plant.

Progress to Date

Although the environmental documentation and most of the design for the TFTF was completed, the TFTF has been delayed due to the lack of funding for the high cost of construction and testing (over \$180 Million). Some technology development is continuing as part of the design efforts primarily funded by the USBR to date. The CBDA transferred approximately \$20.6 million to the USBR for the construction of the TFTF, but these funds have not been used. The USBR has been funding the majority of the design and research activities through internal appropriations including those from the CVPIA for Tracy Fish Facility improvements.

The State has likewise initiated design activities for the proposed Clifton Court Forebay Fish Facility intake. Cost estimates have been developed, but due to the uncertainty of the requirements impacting significant features, these estimates have a significant level of uncertainty and range. Further design work on these facilities is pending the outcome of on-going efforts.

Design criteria for the protection of delta smelt may significantly add to proposed project costs (due to larger screen, alternative collection systems, etc.). Survival of these fish at the existing South Delta fish facilities is variable and facility design, hydraulic, and operational criteria for their protection is uncertain. To investigate a critical component of the existing salvage process and proposed solutions to those investigations, the CBDA and the IEP initiated the Collection, Handling, Transportation, and Release (CHTR) studies. This three year study led by DFG will help determine the facility factors that impact their protection and if cost effective designs are feasible. If survival in the CHTR can not be cost effectively improved for delta smelt other operational methods such as EWA might be used for protection and their design criteria may not drive the design features of proposed facilities. Information from these studies should be available in 2006.

Additional South Delta fish facility studies that are ongoing include those at Tracy through the CVPIA, and those for the IEP relative to understanding existing fish facility impacts. The USBR will continue to improve their facilities due to CVPIA mandates and aging facility concerns.

Cost/Benefit Needs

It will be difficult to conduct a cost/benefit analysis on alternatives (alternatives to screens or screen alternatives) if there is no substantial basis for comparison. The CBDA's planning performance measures are expected to be developed on a "cost per acre foot," "cost per fish saved," "cost per acre of habitat restored or developed" basis. Facility alternatives and scheduling actions are indeterminate without agreement on fish facility objectives and information.

Decision Timeframe - Conveyance Program Drivers:

8500 SDIP

6/04 - Complete Final EIR/S. This Document will include a process for getting to 10,300 including fish facility actions ("10,300 roadmap").

Schedule for Decision

By early 2004, the Forum should provide guidance to DWR on the process or sequence of facility actions that it will take to get to 10,300. ESA consultation on the 8500 SDIP is also likely to include some language on fish facility actions.

CHTR Studies

11/03 – 3/06: Three years of data will be collected on CHTR relative to delta smelt survival and stresses in the existing system. New technologies will be investigated to see how well delta smelt can survive a new or modified CHTR process as well.

Schedule for Decision

By March 2006, data should be available on the extent that delta smelt criteria should drive proposed fish facility design features. If delta smelt salvage operations (CHTR) do not result in significant survival benefits (or costs are prohibitive), then fish facility decisions for delta smelt protection will be made. Alternatives to DS protection could involve facility operational measures to reduce entrainment, EWA exchanges to reduce pumping when fish are critical, or salvage operation changes based on the new data. Facility design criteria may be modified or better developed at this point.

Tracy Fish Test Facility

Development of a demonstration test facility has been in planning and design stages since 1998. A test facility design was developed that was very flexible structurally and operationally. The cost and justification of construction and testing of this large facility has delayed implementation. Lower cost facility options are being discussed at the technical level, but no direction on facility scope or budget as been developed.

Schedule for Decision

The urgency of this work is related to how the technology development from this effort will feed into new facility designs for the Tracy FF upgrade or SDIP. If the information is necessary and it is not available, design criteria will have to be negotiated or err on being conservative.

10,300 SDIP

The schedule for this project is being revised. Design data for facilities will be dependant on CHTR efforts, application of improved fish salvage facility technologies (from Tracy studies and elsewhere), and fish screen criteria including acceptance of criteria variances. It was envisioned that a 2500 cfs module would be initially constructed to implement this pumping with full fish facility buildout actions after this. Design and operational criteria must be available to initiate final design activities.

Schedule for Decision

Decisions on this process will be made in the 8500 SDIP environmental documentation. The "10,300 roadmap" should outline this process, in which case, facility decision process should be made in early 2004. Design criteria may not be available until 2006 are earliest.

Clifton Court Forebay/Tracy Pumping Plant Intertie

The ROD states that this intertie will be investigated beginning in 2005. This joint feature will be tied to decisions of SWP/CVP Joint Point and SDIP actions. A decision on cost or biological benefit will be investigated. An intertie would only be considered if new fish facilities are planned and it is cost effective and biologically beneficial to do so. (Note: this Intertie is not the CVP/SWP aqueduct Intertie that is being considered)

Schedule for Decision

This decision process will be initiated in 2005. The 10,300 roadmap should include a discussion of this potential action. As in the 10,300 SDIP, decisions on a facility implementation process should be made in early 2004.

Existing South Delta Fish Facility Studies

Numerous studies have been conducted at the existing facilities to document losses and to make minor facility improvements. Many of these studies have been conducted through the IEP by DFG or at the Tracy FF as part of their CVPIA mandates. Regardless of CVPIA, the aging Tracy FF is in need of repair. The State's fish facility has been studied to understand impacts and to justify several upgrades. A workshop on Tracy Fish Facility understanding is proposed in Fall 2003. 2003/2004 study plans for Tracy are currently being prepared. Studies at the SWP's fish facilities are conducted as necessary.

Schedule for Decision

None. This work will continue to be conducted under CVPIA or through the IEP until new facilities replace the existing ones.